

PROCEEDING



international seminar

STRATEGY TO MANAGE BIO-ECO-HEALTH SYSTEM FOR STABILIZING ANIMAL HEALTH & PRODUCTIVITY TO SUPPORT PUBLIC HEALTH



Surabaya-Indonesia, 19-20 June 2012
JW Marriott Hotel Surabaya

EDITORS:

Michael P. Ward (Australia)
Faouzi Kechrid (Africa)
Montip Gettayacamin (Thailand)
Fedik Abdul Rantam (Indonesia)
Suzanita Utama (Indonesia)

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I-MHERE SUB-COMPONENT B.2.C PERFORMANCE BASED CONTRACT

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MESSAGES

PROF. DR. H. FASICH, APT.
Rector of Universitas Airlangga



International Seminar STRATEGY TO MANAGE BIO-ECO-HEALTH SYSTEM FOR STABILIZING THE ANIMAL HEALTH AND PRODUCTIVITY TO SUPPORT PUBLIC HEALTH

Assalamu'alaikum warahmatullahi wabarakatuh

Praised be to Allah SWT for His love and compassion that today we all gather for an important and interesting international seminar on healthy animal management system.

As we all aware, up to the present time, the world is still struggling to overcome various zoonotic diseases that have been threatening human being all over the world for centuries. Through the development of modern information and technology, we also know that those diseases weaken and decrease human quality of life sooner or later.

Therefore, concern over the problem is needed, especially in the region where people live below poverty line. As nothing can be expected from a nation with low quality of human life, it is about time for us to work hand-in hand to eradicate and prevent the outbreak of all kinds of diseases. Also, every human being is in need of good quality of domestic animals which provide plenty of protein for healthy people.

Time has come for all parties, including institutions of science to recognize the essential link between human, domestic animals and wildlife health, and the threat disease poses to people, their food supplies and economies, the biodiversity essential to maintaining the healthy environments and functioning the ecosystems.

I belief and hope that today's seminar will be able to strengthen our collaborations and networking, as an important step in reaching a safe and healthy life.

To all participants, I would like to thank you for making this seminar a success and the organizing committee for a wonderful work.

Thank you very much.

Wassalamu'alaikum warahmatullahi wabarakatuh.

MESSAGES

PROF. HJ. ROMZIAH SIDIK, PH.D., DVM.

Dean of the Faculty of Veterinary Medicine
Universitas Airlangga, Surabaya - Indonesia



Assalamu'alaikum warahmatullahi wabarakatuh

Dear Sir/Madam

On behalf of Organizing Committee the International Seminar entitled “STRATEGY TO MANAGE BIO-ECO-HEALTH SYSTEM FOR STABILIZING ANIMAL HEALTH AND PRODUCTIVITY TO SUPPORT PUBLIC HEALTH”, I would like to say thank you to the honorable: Rector Airlangga University, The Chairman of Academic Senate-Airlangga University, East Java Governor, Director General Animal Health and Husbandry-Indonesia, Chairman Bank Rakyat Malaysia, President of World Veterinary Association, President of Indonesian Veterinary School Association, President of Indonesian Veterinary Medicine School Association, Chairman of Animal Husbandry- East Java Province and Surabaya City. And also to all our special guest: The Dean VetAgro Sup Nationale Veterinary School of Lyon from France, The Chairman of Veterinary Public Health and Food Safety The University of Sydney Australia, Former Dean School of Animal and Veterinary Sciences – Faculty of Sciences The University of Adelaide Australia, Representatives Envoy School of Veterinary and Biomedical Sciences Murdoch University Australia, Former Dean Institute of Veterinary – Animal and Biomedical Science Colleges of Sciences Massey University, Regional Director for Southeast Asia, AAALAC International, Chairman of Animal BSL – 3 Airlangga University, and all best colleague the Deans of Veterinary Schools in Indonesia (Institute Pertanian Bogor, Gajah Mada University, Universitas Airlangga, Udayana University, Syahkuala University, Brawijaya University, HasanudinUniversity. University Nusa Cendana, University Wijayakusuma and University of Nusa Tenggara Barat), also the Deans comes from the other Faculty of Universitas Airlangga. I also would like to say thank you to the partnership Institutions and Industries, and I proudly to all the academic staffs and students and guest participants.

Welcome to the event in Surabaya, the city which located in East Java province. As one of Indonesia's leading prefectural capital, Surabaya is keenly aware of the need to promote into a cosmopolitan city. East Java is settled between two world class tourist destinations, Jogjakarta and Bali. East Java, a province rich of tropical sights and cultural heritage is easily fitted to your journey from Jogjakarta to Bali. As natural lovers would expect an agritourism, the smoking volcano “Mt. Bromo” and the “G-Land” as a surfer paradise are the East Java's breathtaking tourist attractions that should not be missed. East Java also have several National Park that protected bulls (*Bos javanicus*) and turtles (*Chelonians*), and the specific centre of commodities livestock, as a plan in the future will promote Timorensis deer as a potential meat animal product. For art lovers special dance, you can see the magical dance

of Reog Ponorogo. We are pleased to introduce you these tourism objects of splendid, scenic and cultural. The best to know this spectacular East Java is to come and see yourself.

I am very great pleasure for your attended to the International Seminar that hosted by Faculty of Veterinary Medicine, Airlangga University. It because of the God bless and love to us, therefore we could arranged the peach among Veterinary School in Asia region and in the World for Strengthen and Establishment, Benchmarking and branding our Veterinary School by global link.

Alhamdulillah robba a'amin, thank you so much for The God.

During these two days, the event programs include four main programs, such as plenary lectures, the scientific paper session, International Standardization Veterinary Scholl Curriculum base on OIE recommendation with possibly to arrange Twinning and Double Degree Study Program with France, New Zealand and Australia Veterinary School, and to construct Indonesian Veterinary Medicine Council supported by Indonesian Veterinary School Association and Stake Holders. We hope all of you could follow the programs by pleased, savor and it will be beneficial for us.

In this moment, I would like to say thank you to:

Chairman of Indonesia-Managing Higher Education Relevance and Efficiency (IM-HERE) Project-Sub Component B.2.c. Performance Based Contract for supporting and funding the International Seminar.

Rector of Universitas Airlangga for supporting and funding the International Seminar based on Annual Budgeting Plan 2012 of Airlangga University.

The sponsorships that supporting to the event.

All Keynote speakers and invited speakers.

All participants.

Finally, thank you very much for all the distinguish guest for your kindly and closely to all the participants, please have a nice time to enroll the event.

Thank you very much.

Wassalamu'alaikum Warahmatullahi Wabarakatuh.



MESSAGES

DR. ANWAR MA'RUF, DVM., M.KES.

Chairman



Assalamu'alaikum warahmatullahi wabarakatuh

Ladies and Gentleman

I have the honour of welcoming, delegates and speakers to Surabaya and the 2012 International Seminar.

Organised under the theme "Strategy to Manage Bio-Eco-Health System for Stabilizing the Animal Health and Productivity to Support Public Health" this program was aimed to provide a forum for all those interested in sharing and discussing common concerns and up to date research in the physical, biological, social and economical changes that it happen in the environment which generates for human health.

It is only through exchange of information that we can carefully develop the strategic and medical intervention in managing bio eco health system to increase health and reproduction animal for supporting public health. So I hope you will take advantage of the many opportunities this program provides to network with colleagues from around Indonesia and overseas.

The successful organization of this program has required the dedication and time of all committee members. Much work went into preparing the program. I am very grateful for the financial support we have received from our sponsors which are recognized in this book. It would not be possible to hold this program without their support.

I do hope that the seminar will be fruitful for all of us and please enjoy your stay in Surabaya.

Thank you very much.

Wassalamu'alaikum warahmatullahi wabarakatuh.

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THE EFFECT OF CISDIAMMINEDICHLOROPLATINUM (II) TREATMENT ON DEVELOPMENT OF FOLLICLES RAT (*RATTUS NOVERGICUS*) OVARIES

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ABSTRACT

This aims of the research was to determine the effect of Cis diammine dichloro platinum (II) toward ovarian histologic overview (the number of primary follicle, seconday follicle, tertiary follicle, Graafian) in rat (*Rattus novergicus*) as a model. The samples were 32 Rat (*Rattus novergicus*) randomly divided into two group, control and treatment group. At the estrus phase, the control group was injected by NaCl 0,9% IP, and the treatment group was injected by *Cisdiammine dichloroplatinum (II)* 5 mg/kg bw IP. The rat were slaughtered at the 7th day, oophorectomy was performed, continued with hematoxylin eosin staining for the amount of follicles examination. The result of the research indicated that the amount of primary, secondary, tertiary, de Graaf, and atrethic follicle of treatment group were 8.01 ± 0.84 , 3.71 ± 1.25 , 2.23 ± 0.41 , 1.98 ± 0.33 , and 1.54 ± 0.41 respectively. It were significantly lower ($p < 0,05$) compared to control group 9.12 ± 0.96 , 5.63 ± 0.98 , 4.70 ± 1.53 , 2.26 ± 0.75 , and 1.88 ± 0.37 respectively. It could be concluded that the injection of Cisdiamminedichloroplatinum (II) in the rat (*Rattus novergicus*) as a model cause a decrease of the number of follicles.

Keywords: *Cisdiamminedichloroplatinum (II)*, *Rattus norvegicus* and follicles

INTRODUCTION

Cisdiamminedichloroplatinum (II) is a chemotherapy drug that has more than 25 years used to treat ovarian, testicular, cervical, lymphoma, sarcoma and others. Cisdiamminedichloroplatinum (II) is effective in treating cancer but at therapeutic doses there is side effects such as neurotoxic or nephrotoxic (Hanigan *et al.*, 2003). Bond of Cisdiamminedichloroplatinum (II) to genomic DNA (gDNA) served as a way of antitumor by damaging mechanisms of transcription and DNA replication of cancer cells, thereby triggering a cytotoxic effect leading to apoptosis and death of cancer cells (Cepeda *et al.*, 2007). However, the use of Cisdiamminedichloroplatinum (II) in the treatment of cancer, among others, cause damage to the ovaries that can lead to organ damage to the oocyte cell.

This study aims was to determine the effect of Cis diammine dichloro platinum (II) toward ovarian histologic overview the number of development follicles in rat (*Rattus novergicus*) as a model.

MATERIALS AND METHODS

Thirty-two rats (*Rattus novergicus*) were divided randomly into two groups: Control group and treatment group. In the estrous phase of the animal control group were injected with physiological saline, whereas the treatment group were received Cisdiamminedichloroplatinum (II) 5 mg/kg bw injection intraperitoneally. Animal sloughtered for ovarian retrieval on the seventh day after injection, then made histological preparations stained with haematoxylin eosin to determine the amount of each phase of the follicles.

RESULT AND DISCUSSION

The results showed that the number of primary follicles of treatment group was 8.01 ± 0.84 significantly lower ($p < 0.05$) compared to 9.12 ± 0.96 of control group. On the number of secondary follicles of treatment group was 3.71 ± 1.25 significantly lower ($p < 0.05$) compared to 5.63 ± 0.98 of control group. The number of tertiary follicles of treatment group was 2.23 ± 0.41 significantly lower ($p < 0.05$) compared to 4.70 ± 1.53 of control group. The number of follicles de Graaf of treatment group was 1.98 ± 0.33 significantly lower ($p < 0.05$) compared to 2.26 ± 0.75 of control group. The number of atretic follicle of treatment group was 1.54 ± 0.41 significantly lower ($p < 0.05$) compared to 1.88 ± 0.37 of control group.

CONCLUSION

Based on the results of these studies concluded that the injection of Cisplatin (II) in the rat (*Rattus norvegicus*) as a model causes a decrease of the number and diameter of follicles.

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